MECHANICAL ENGINEERING: PRE-MEDICAL, BSME

Requirements for Students Matriculating in or before Academic Year 2019-2020. Learn more about University Academic Regulation 3.1 (http://catalog.okstate.edu/university-academic-regulations/#matriculation).

Minimum Overall Grade Point Average: 2.50
Total Hours: 135

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ENGR 1111</td>
<td>Introduction to Engineering 1</td>
<td>1</td>
</tr>
<tr>
<td>ENGR 1332</td>
<td>Engineering Design with CAD for MAE 1</td>
<td>2</td>
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<tr>
<td>ENGR 1412</td>
<td>Introductory Engineering Computer Programming 1</td>
<td>2</td>
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<tr>
<td>ENSC 2113</td>
<td>Statics 1</td>
<td>3</td>
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<tr>
<td>ENSC 2123</td>
<td>Elementary Dynamics 1</td>
<td>3</td>
</tr>
<tr>
<td>ENSC 2143</td>
<td>Strength of Materials 1</td>
<td>3</td>
</tr>
<tr>
<td>ENSC 2213</td>
<td>Thermodynamics 1</td>
<td>3</td>
</tr>
<tr>
<td>ENSC 2613</td>
<td>Introduction to Electrical Science 1</td>
<td>3</td>
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Hours Subtotal: 38

Major Requirements

Engineering Science

ENSC 2333 Fluid Mechanics 1
ENSC 3313 Materials Science

Specific Professional School

MAE 3013 Engineering Analysis and Methods I
MAE 3113 Measurements and Instrumentation
MAE 3233 Heat Transfer
MAE 3324 Mechanical Design I
MAE 3403 Computer Methods in Analysis and Design
MAE 3524 Thermal Fluids Design
MAE 3724 Dynamic Systems Analysis and Introduction to Control
CHEM 3112 Organic Chemistry Laboratory
CHEM 3152 Organic Chemistry II
IEM 3503 Engineering Economic Analysis
MICR 3033 Cell and Molecular Biology

Select 7 hours of the following 2 categories, selecting one course from each category so that both categories are represented:

Category I (Realization):

MAE 4243 Aerospace Propulsion and Power
MAE 4263 Energy Conversion Systems
MAE 4353 Mechanical Design II
MAE 4363 Advanced Methods in Design
MAE 4513 Aerospace Structures I
MAE 4623 Biomechanics
MAE 4703 Design of Indoor Environmental Systems
MAE 4713 Thermal Systems Realization

Category II (Capstone Design):

MAE 4344 Design Projects
MAE 4354 Aerospace Systems Design for Mechanical Engineers

6 hours of MAE electives to be selected from the following list, or from courses in the Category I listed above, but not used to satisfy the category requirement:

MAE 3033 Design of Machines and Mechanisms
MAE 3123 Manufacturing Processes
MAE 3223 Thermodynamics II
MAE 3253 Applied Aerodynamics and Performance
MAE 3293   Fundamentals of Aerodynamics
MAE 4053   Automatic Control Systems
MAE 4063   Mechanical Vibrations
MAE 4273   Experimental Fluid Dynamics
MAE 4313   Advanced Processing of Engineered Materials
MAE 4333   Mechanical Metallurgy
MAE 4583   Corrosion
MAE 4733   Mechatronics Design

The following are suggested, but not required:
BIOC 3653   Survey of Biochemistry
BIOL 3023   General Genetics
BIOL 3204   Physiology
BIOL 4134   Embryology

CHEM 1314 is recommended with CHEM 1515 to meet the Oklahoma medical schools' requirement for 9 hours of inorganic chemistry

| Hours Subtotal | 54 |
| Total Hours    | 135 |

1 Courses that must be completed prior to admission to professional school.
2 Denotes medical school requirements. PSYC 1113 Introductory Psychology (S) is recommended to satisfy (3) hours of (S) requirement. PHIL 3833 Biomedical Ethics (H) is recommended to satisfy (3) hours of (H) requirement.

Note: The entrance requirements of medical schools of choice should be reviewed to ensure an application is competitive.

Admission to Professional School (required)
- Refer to the OSU Catalog corresponding to your matriculation date for detailed admissions requirements.

Graduation Requirements
1. A minimum GPA of 2.50 is required in all MAE prefix Courses.
2. A minimum overall GPA of 2.50 is required in 4000-level MAE prefix courses.
3. A 'C' or better is required in each course that is a prerequisite for a major course taken.
4. The major engineering design experience, capstone course, is satisfied by MAE 4344 Design Projects or MAE 4354 Aerospace Systems Design for Mechanical Engineers.

Additional State/OSU Requirements
- At least: 60 hours at a four-year institution; 30 hours completed at OSU; 15 of the final 30 or 50% of the upper-division hours in the major field completed at OSU.
- Limit of: one-half of major course requirements as transfer work; one-fourth of hours earned by correspondence; 8 transfer correspondence hours.
- Students will be held responsible for degree requirements in effect at the time of matriculation and any changes that are made, so long as these changes do not result in semester credit hours being added or do not delay graduation.

• Degrees that follow this plan must be completed by the end of Summer 2025.